FAMILY LYCEUM.

PUBLISHED WEEKLY, AT THE LYCEUM PRESS, No. 3, CORNHILL, BY GEORGE W. LIGHT & Co.

VOL. I. BOSTON, SATURDAY, SEPTEMBER 1, 1832. No. 3.

FAMILY LYCEUM.

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TERMS: Two dollars a year, in advance. Six copies for ten dollars.

SELF-MADE MEN.

From the Quarterly Register.

THE late Professor HEYNE of Goettingen was one of the greatest classical scholars of his own, or of any age. He succeeded the great John Mathias Gesner as Professor of Eloquence at Goettingen, an office, which he held for fifty years, and in which, by his publications, and the attractions of his lectures, he placed himself nearly at the head of the classical scholars of his age. Yet the first thirty-two or thirty-three years of his life, he spent in almost incessant struggle with the most depressing poverty. His father was a poor weaver with a large family. Heyne says 'that he has often seen his mother return home, on a Saturday evening, from an unsuccessful effort to sell the goods, which his father had manufactured, weeping and wringing her hands.' He entered the University of Leipsic with but four shillings in his pocket, and nothing to depend upon except the small assistance which he might receive from his godfather, a parsimonious old gentleman, who scarcely ever wrote to him, except to inveigh against his indolence—often actually addressing his letters on the outside '*To Mr. Heyne, Idler, Leipsic.*' During all this while he allowed himself only two nights' sleep in a week.

EPICTETUS, the celebrated Stoic Philosopher, was born a slave, and spent many years of his life in servitude. This was the fact also with ÆSOP, PUBLIUS SYRUS, and TERENCE.

The Abbé HAUY, who died in Paris, a few years since, celebrated for his writings and discoveries in *Chrystallography*, attained his distinguished elevation in spite of every disadvantage of birth.

WINCKELMAN, one of the most distinguished writers on classic antiquities and the fine arts, that modern times have produced, was the son of a shoemaker. He contrived to keep himself at College, chiefly by teaching some of his younger fellow students, while at the same time he, in part, supported his poor father at a hospital.

ARNIGIO, an Italian Poet, of the sixteenth century, of considerable genius and learning, followed his father's trade, of a blacksmith, till he was eighteen years old.

BENEDICT BAUDOUIN, one of the learned men of the sixteenth century, worked for many years at his father's trade, that of a shoemaker; and in the course of his life published a very elaborate work, 'on the Shoemaking of the Ancients.'

The celebrated Italian writer, GELLI, when holding the high dignity of Consul of the Florentine Academy, still continued to work at his original profession of a tailor.

METASTASIO was the son of a common mechanic, and used when a little boy to sing his extemporaneous verses about the streets.

The father of HAYDN, the great musical composer, was a wheelwright, and filled also the humble occupation of a sexton, while his mother was at the same time a servant in the establishment of a neighboring nobleman.

The father of JOHN OPIE, the great English portrait painter, was a working carpenter in Cornwall. Opie was raised from the bottom of a saw-pit, where he was employed in cutting wood, to the Professorship of Painting, in the Royal Academy.

The parents of CASTALIO, the elegant Latin translator of the Bible, were poor peasants, who lived among the mountains of Dauphiny.

Dr. JOHN PRIDEAUX, bishop of Worcester, obtained his education by walking on foot to Oxford, and getting employment, in the first instance, as assistant in the kitchen of Exeter College.

The father of INIGO JONES, the great architect, was a cloth-worker; and he himself also, was designed originally for a mechanical employment.

Sir EDMUND SAUNDERS, chief justice of the court of King's Bench, in the reign of Charles II., was originally an errand boy at the Inns of court.

LINNÆUS, the illustrious founder of the science of Botany, was, for some time, apprenticed to a shoemaker.

The famous BEN JONSON worked for some time as a brick-layer or mason, 'and let not them blush,' says the historian Fuller, 'that have, but those that have not, a lawful calling. He helped in the building of the new structure of Lincoln's Inn, when having a trowel in his hand, he had a book in his pocket.'

Dr. ISAAC MADDOX, who, in the reign of George II., became bishop, first of St. Asaph, and afterwards of Worcester, and who wrote an able defence of the doctrine and discipline of the Church of England, lost both his parents at an early age, and was placed, in the first instance, by his friends, with a pastry cook.

Dr. ISAAC MILNER, Dean of Carlisle, who filled the chair which Sir Isaac Newton had occupied at Cambridge, that of Lucasian Professor of Mathematics, was originally a weaver;—as was also his brother JOSEPH, the well known author of the Church History.

Of the same trade, in his younger days, was Dr. JOSEPH WHITE, Professor of Arabic at Oxford.

THOMAS SIMPSON, a very able English Mathematician, Professor of Mathematics at Woolwich Academy, and fellow of the Royal Society, was the son of a weaver. After having acquired a very slight acquaintance with reading, he was placed in the shop with his father. Instead of giving any encouragement to his son's fondness for reading, the father, after many reprimands, forbade him even to open a book, and insisted upon his confining himself to his loom for the whole day. He was finally banished from his father's house, and compelled to seek his fortunes abroad. He contrived to maintain himself for a while, in a neighboring town, with a poor widow, by working at his trade, devoting his spare moments to his favorite employment of reading, whenever he could borrow a book. In his twenty-fifth or twenty-sixth year, he went to London, without a letter of recommendation, and with scarcely any thing in his pocket, except a *manuscript treatise of his own on Fluxions*, more valuable than any preceding treatise on the subject in the language.

The great Sir WILLIAM JONES was a most astonishing example of application to study, in spite of all difficulties. His maxim was, never to neglect any opportunity of improvement which presented itself. It was a fixed principle with him never to neglect prosecuting to a successful termination what he had once deliberately undertaken.

WILLIAM HUTTON, author of the History of Birmingham, Fellow of the Antiquarian Society, &c. was the son of a working woolcomber at Derby. 'My poor mother,' says Hutton, 'more than once, one infant on her knee, and a few more hanging about her, have all fasted a whole day; and when food arrived, she has suffered them, with a tear, to take her share.' From his seventh to his fourteenth year he worked in a silk mill—and was then bound as an apprentice to a stocking weaver in Nottingham.

JAMES FERGUSON, the celebrated writer on astronomy, is one of the most remarkable instances of self-education, which the literary world has seen. His father was in the humble condition of a day-laborer.

At the age of seven or eight, young Ferguson actually discovered two of the most important elementary truths in mechanics—the lever, and the wheel and axle. He afterwards hit upon others, without teacher or book, and with no tool but a simple turning lathe, and a little knife. While he was feeding his flock, in the employment of a neighboring farmer, he used to busy himself in making models of mills, spinning wheels, &c. during the day, and in studying the stars at night.

Before his death, he was elected a Fellow of the Royal Society; the usual fees being remitted, as had been done in the cases of Newton and Thomas Simpson. George III., who, when a boy, was occasionally among the auditors of his public lectures, soon after his accession to the throne, gave him a pension of fifty pounds per annum from the privy purse.

COMMON THINGS.

SALTS.

THE ocean is one vast store of mineral substances in the state of solution. The most abundant mineral in this great liquid deposit is common salt, which is supposed to constitute about one twenty-eighth part of the whole ocean. Numerous other salts, such as glauber salts, epsom salts, salt petre, alum; indeed there is reason to believe, that every mineral which is soluble in water, is contained, in greater or less quantities, in the briny deep.

Besides the ocean, where common salt is found in such quantities as to keep it from putrefaction, mines, hills, and even mountains, are composed of the same useful substance.

In Poland, the salt mines have been worked for three or four centuries at least. They are now carried to a great depth, and extend several miles under ground. They are entered by six shafts five or six feet in diameter, which lead to various accommodations beneath, such as chambers, chapels, and altars, ornamented and supported by pillars, the whole being constructed of salt.

Beneath these mines are numerous springs and streams, not only of salt, but of fresh water, which supply the numerous hands engaged in them. In some instances hydrogen gas is formed in such quantities in these mines, as to produce disastrous explosions.

Though the salt mines of Poland, and the neighboring countries, are more numerous and have been longer wrought, than any other in Europe, they furnish this useful and necessary material in much less abundance at present, than those of Cheshire, in England. The science, skill and enterprise of the English, not only furnish their own tables with salt as they do with most other articles of sustenance and luxury, but they place 'Liverpool salt' upon many of our tables, and even upon those in the vicinity of the salt mines of Poland.

In Spain, the deposits of salt rise into hills and even mountains, of great elevation and extent. The same useful and necessary substance is found in great quantities in Africa, frequently dispersed through the soil.

In our own country, the deposits of rock salt have not been discovered in many instances rising above the surface of the ground, but beneath the surface it must be extensively diffused. Salt springs are discovered in numerous places, in different parts of the country. Some of these springs are upon, or within a few feet of the surface; others are procured by perforating the earth five or six hundred, and in some instances eight or nine hundred feet, from which depth the salt water rises from a source probably not well understood, and discharges itself in a stream upon the surface, in sufficient abundance to supply extensive manufactories of this article of domestic and political economy.

In some of the natural deposits of rock salt, it is found sufficiently pure for use, and requires only to be reduced to a powder; in most instances, however, it is first dissolved in water and then evaporated. When the material is procured from springs or the ocean, the manufactory of it is little more than evaporation, which is produced both by the sun and artificial heat.

In the West Indies, and many places upon our coast, where water for the manufactory of salt is taken from the ocean, the evaporation is effected by the heat of the sun. The brine is let into artificial ponds or vats, where it is exposed to the rays of the sun, until the evaporation precipitates the salt into crystals in the form of cubes, that being the shape in which the muriate of soda, (common salt) crystallizes.

The process of crystallizing common salt is different from that of most other salts.—As hot water dissolves very little more of common salt than cold water, it can be crystallized, or brought into a solid state, only by evaporation; of most other salts, such as glauber salts, (sulphate of soda) epsom salts, (sulphate of magnesia) alum, (sulphate of alumine) copperas, (sulphate of iron) blue vitriol, (sulphate of copper) and many others, hot water holds in solution much larger quantities than cold water. Consequently, as hot water which is saturated with any of the last mentioned salts becomes cool, it throws down the mineral which is dissolved in it, in the form of crystals of different shapes, each salt having a form of its own, where it crystallizes.

Taking advantage of these different principles in crystallization, the manufacturers of salt form, from water taken from the ocean, common salt during the summer, by evaporation, and during the winter they procure glauber and epsom salts, by the other process of crystallization, or by reducing the water from a warmer to a colder state.—The crystals of alum, copperas, blue vitriol, and some other salts, are formed by heating sulphuric acid, or the liquid which dissolves them, to a high heat, and then suffering it to cool, when abundant and beautiful crystals are formed, each taking the shape which the Creator has established for it, without the slightest variation either in the number of sides or the angles.

In the language of chemical science, the term salt has a much more extensive meaning, than in common language. When chemists speak of salts, they mean all substances composed of acids, combined with alkalies, earths or metalic oxids. This definition of salt embraces a very numerous class of substances. Pearlash, (carbonate of potash) limestone, (carbonate of lime) gypsum, (sulphate of lime) white lead, (carbonate of lead) chrome yellow, (chromate of lead) and numerous other substances, not commonly known by the name of salts, belong to this class of bodies.

On some future occasion, either in the Family Lyceum or the 'Scientific Tracts', and probably in both, the common, numerous, useful and interesting class of bodies, both in nature and the arts, under the name of salts, will be treated of separately, and more minutely, with their relations to domestic and political economy, and their combinations, illustrating the laws, the simplicity, the beauty, the grandeur and the wonderful precision of nature's operations, and of the power, wisdom, goodness and constant agency, of the hand which conducts them.

ALPHABET OF NATURE.

THE English Alphabet presents as striking a mass of confusion, disorder, and as perfect a want of science or system, as could readily be found or formed by the ingenuity or skill of man. Each successive step it has taken in coming to its present form, has done little more than to make 'confusion worse confounded.'

The simplicity, beauty, harmony, science, and even grandeur and sublimity of the alphabet of nature, presents as striking marks of divinity and perfection, as does that of books, especially our own alphabet, of human frailty, and of imperfect erring man.

The alphabet of nature, or those few and simple substances and principles, which by varied and beautiful combinations of nature form the earth and the heavens, with all their furniture, so rich, so useful, so grand and so harmonious, carry in every trace the most convincing proof of their divine Original; and of course, that it is both the duty and the interest of feeble, erring, ignorant man to study and learn it, that he may be able to read the older volume of God, every leaf of which is full of instruction and wisdom, and removes every doubt that the other volume which is said to have been sent from heaven has the same author.

The few and simple letters which constitute the alphabet of nature, are the same among all nations and in all ages of the world. They are the same in England, France, Germany, Africa, China, or New Holland, as they are in the verdant fields, towering forests or lofty mountains of our own vast continent; and they form the same language, and are capable of being studied at all times and in all places with nearly the same ease and delight.

Both the alphabet and the language of nature, presented the same lines and the same leaves, to Adam as to Solomon; to David as to Isaiah; to St. Paul and St. John, as to Davy and Cuvier.

The same letters, the same language and the same book, which inspired David, Isaiah and Paul with love and adoration to Him who spread out the heavens as a curtain, laid the foundations of the deep, and holds the sea in the hollow of his hand, have come down to us, with the additional light shining upon them by the science of the eighteenth and nineteenth centuries. Under such circumstances, what American can be so stupid or so unchristian, as not to desire

to learn their characters, or to become familiar with their contents. And yet, is it not true, that many who live in this boasted age of religion and science, are at least two thousand years behind those who lived two thousand years ago?

What a very small portion of the self-flattered citizens of New England have learnt the first letters, or can read a single line in the volume of creation! How very few are familiar with the two simple elements of the air they breathe, or of the water they drink, or with the endless and beautiful operations conducted by these elements, and all for their own use and happiness.

The ignorance and stupidity of this boasted age of intelligence will appear the more remarkable and unpardonable, when we reflect, that by learning four letters of the alphabet of nature, with their combinations and changes, we can read the older volume of our Creator, as its leaves are unfolded by the whole animal and vegetable kingdoms, by the waves of the sea and the winds of heaven, with many portions of those immovable mountains which he has founded with his hand.

We hope, therefore, that our readers will pardon us, for presenting to their view the four first letters of the alphabet of nature, and for inviting them to present them to their neighbors, that we may all unite in learning the language and reading the book, which, by the voice and the finger of God, spreads out on every leaf, under the light of science, the most delicate shades of beauty, the loftiest eloquence, and a sublimity truly divine.

Although these letters were named in our first number, we must beg leave again to call them up, and to mention some more of their combinations, as they appear on the pages of the great volume of nature. Into the whole of the vegetable kingdom, in all its variety, beauty and grandeur, from the loftiest tree of the forest to the humblest plant by the wayside, only three simple substances ever enter, at most but to a very slight extent. Differently combined, these three simple elements constitute the grandeur of the oak, the beauty of the violet, and the fragrance of the rose. At one time they clothe extensive plains with rich garments of green; at another, load the farmer's field with the choicest wheat, beautifully waving with the gentlest breeze; at another, they bedeck the garden with flowers, which regale our senses with their beauty and fragrance; and at all times render their cheerful and united aid to spread out, over the whole vegetable creation, the variety, richness and grandeur, so delightful to our senses and so worthy their author.

If vegetable productions are divided or analyzed into parts, each part still retains in most cases, in some combination, the three simple substances of which the whole is composed. Every particle of the leaf, flower, fruit, bark, wood or root; all the food collected and prepared from them to enrich our tables—the bread, the pastry and the sweetmeats; all the starch, gluten, sugar and acids, and every particle of each of these substances, are composed entirely of these three simple elements—of these three first letters of the alphabet of nature.

If to the elements of the vegetable kingdom one more simple substance be added, they form the elements of the whole, or nearly the whole, of the animal creation.—The flesh of the elephant, and all the wild animals of the forest; the whale, and all the fishes sporting in the sea; the eagle, and all the birds of the air; the faithful horse, and the patient ox: every insect and reptile; and the animal part of the lord of the lower creation;—are composed of but four simple elements, and three of those are the same as constitute the variety and usefulness of the kingdom of vegetables.

But three of the four letters which fill up the volume of nature, as its leaves are unfolded in the animal and vegetable kingdoms, are necessary to enable the pupil to read the vast ocean and the boundless atmosphere, with all the variety and the grandeur of their operations.

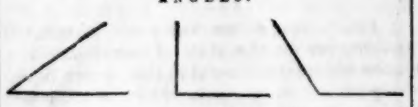
By examining the two preceding numbers of the Family Lyceum, it will be seen that the four letters which fill up so great a part of the vast and sublime volume of nature, are *oxygen*, *hydrogen*, *carbon*, and *nitrogen*; which we hope each of our readers will render as familiar, if they are not already so, as the four first letters of the alphabet of books; as they are more important and more simple, and as we shall have occasion to use them more or less in almost every page of our family paper.

Each of these letters will be made the subject of a distinct article in the future numbers, showing of what substances they constitute a part, how variously they are combined in the same substance, what an endless variety of operations they perform, and what constant, innumerable and important services they render for the beauty and harmony of the material creation, and for the convenience and happiness of the family board, collected at the fire side, the table, or in the social circle.

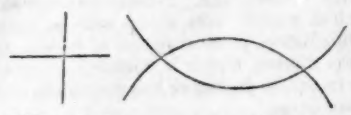
The other letters of the alphabet of nature, will also be named, and some of the lines, and perhaps leaves, which they form in our Creator's 'older book,' presented to our readers.

GEOMETRY.

ANGLES.



Acute Angle. Right Angle. Obtuse Angle.



4 Plane Angles. 3 Curved Angles.

Whenever lines or surfaces meet, they form an angle or angles. When they cross each other, they form four angles. In relation to size, there are three kinds of angles, whether formed of lines or surfaces, called right, acute, and obtuse. When two lines meet or cross each, perpendicularly, [see No. 1 of the Lyceum,] they form one or more right angles. An angle which is smaller or sharper than a right angle, is called an acute angle; one which is larger than a right angle, is called obtuse.

The lines or surfaces which, by meeting, form angles, may be either straight or curved, or both. An angle formed by straight lines, or a linear angle, is never contained by more than two lines. Angles made by surfaces, may be made by two; as in the meeting of the wall and one side of a room; or of three, as in the meeting of the wall and two sides of the room; or of six, as in the apex or upper point of a six-sided pyramid; or of a hundred.

If the reader will cast his eye upon the floor, wall, sides and corners of the room, while this paper is in his hand, he will at once see how many angles are formed in a common plain room, by the meeting of two surfaces, and how many by the meeting of three. If those angles, formed by the meeting of three sides, are called solid angles, and for the sake of distinction, and for the want of a better name, those formed by the meeting of two surfaces, are called superficial angles, any person, by casting his eye around the room where he is sitting, or upon a square box of any kind, may ascertain which angles are most numerous in any parallelopiped, the solid or the superficial angles, and how many there are of each. He will perhaps conclude, that of both kinds, there are in every parallelopiped, twenty; and it will be worthy of his search to find more than that number; and if he should succeed, his discovery would be useful to him, and probably to the world.

By examining the parallelopipeds of the apparatus prepared for schools or for families, any child or adult would probably be able to make many discoveries respecting the angles, surfaces and contents of solids, which will be both useful and interesting. The five regular solids, in the school apparatus, will present to the view of any one who will examine them, many interesting facts relating to angles and practical geometry, which he never thought of, and which he will be able to apply, whether he be a farmer, mechanic, or merchant; or whether she be a house-keeper, or engaged in any pursuit of the useful, the domestic, or the fine arts.

If the farmer casts his eye about his house, his barn, his yards, his fields, or upon the trees of his forest, the leaves or the flowers of his garden, or upon his domestic animals, or upon himself, he will find that the whole, or a single part of it, presents a rich and an appropriate apparatus, to explain and apply the science of angles, and most other parts of Geometry.

If the carpenter should turn his mind to his square and his bevel, and think for a second of their characters and their uses, he would see that he has better apparatus for learning geometry, and that he has it in his power to acquire more and vastly better knowledge of this science of all sciences, than the student in college ever did or ever can have, until he can find a college which is a manual-labor school

The carpenter is in such frequent use of the principle contained in the 47th proposition of Euclid, that it has sometimes been called the carpenter's theorem.

The farmer, in fencing and plowing his field, in laying out and planting his garden, in constructing his tools, in erecting his buildings; the mechanic, in framing his house, in forming his doors, his windows, his tables, his chairs, his beaureaus, in cutting his cloth or his leather; the house-keeper, in preparing her food, in fitting her carpets, and in thousands of nameless operations; the surveyor, in running his lines and plotting his field; the civil engineer, in constructing his roads, his railways, his canals and his bridges; the author, the editor, and the letter-writer, in using the pen or the scissors,—are, by all their operations, illustrating, by the most practical methods, the principles and varieties of angles.

From the view here taken of angles, it will be seen, that there are rectilinear, curvilinear, and recto curvilinear angles; solid and superficial angles; plane, solid and curved solid, and plane curved solid, interior and exterior, and in each, right, acute, and obtuse angles.

If parents will furnish their children with a slate, rule, pencil, a pair of scissors, and a piece of paper, they will have all the apparatus necessary to amuse and instruct both themselves, their fathers and mothers, and their elder brothers and sisters.

THE ARTS.

TABLE FURNITURE.

The articles of furniture upon the table of the plainest farmer, bring into requisition the whole circle of civilized arts. Such is the connection between the different parts of the complicated but most interesting machine of civilized society, that the smallest cog in the smallest wheel can scarcely be moved without affecting all the rest. The manufactory of a pin puts in motion, the ore-digger, the wood-chopper, the wood-carter, the house-builder, the iron-founder, the machine and tool-maker, the wheat-raiser, the bread-maker, the wool and cotton-grower, the cloth-maker, the ship and steam-boat-builder, the goods-seller, the clothes-maker, the ox and horse-raiser, the carriage-builder, the cow-milker, the table-setter, the clothes-washer, the child's instructer, the printer, the type-founder, the press-builder, the paper-maker, the bookseller, the letter-writer, the postmaster, the mail-contractor, the stage-proprietor, the tavern-keeper, the table-waiter, the shoe-blacker, the boot-maker, the blacking-manufacturer, the brush-maker, the twine spinner, the nail-maker, the stone-hewer, the water-drawer, the dam-builder, the book-keeper, the writ-drawer, the justice-pleader, the law-judger, the office-seeker, the rum-drinker, the pill-maker, and the grave-digger.

The services of all these, and thousands of others, are called into requisition in the manufactory of a knife and fork, of an earthen plate, or of a glass tumbler. It was our intention, however, to describe very briefly the processes of one or two of the useful arts, and their economical and political relation to each other. And as the manufacturers of glass, earthen and porcelain ware, use to some extent the same materials, and in other respects are connected with each other, we concluded to bring them under view, but for the want of room in this number, we must defer it to the next.

EXPERIMENTS.

CHEMISTRY.

Blacksmiths have, many thousand times, enlarged the tier of wheels by heating it; and after it is put upon the wheel, again contracted it by cooling it. This experiment illustrates one of the most important principles in heat or in chemistry, viz.: that heat expands and cold contracts bodies.

If a child should fill a vial quite full of water, and set it near the fire until it was hot, he would be able to see whether the water run over the vial, or whether it was but partly filled; and of course, whether heat expands or contracts water.

In a delightful village in New England, where are excellent schools, and a flourishing Lyceum, and of course the society intelligent and refined, many of the ladies have ornamented their mantel-pieces with flower baskets, urns, &c. made of crystals of alum, formed by their own hands as follows.—They saturated with alum as much water, when boiling, as would cover the frame of the basket they wished to form. When removed, and put into any vessel convenient for the occasion, and suffered to cool, the article on which they wished the crystals to form was immersed in the water, and crystals of great beauty formed all over the wire thread, &c. which gave it shape.

Any one who will repeat this experiment, will see whether alum crystallizes in regular forms, and of how many sides and angles the crystals consist.

INTELLECTS.

A mechanic in Boston, who confined himself exclusively to the business of turning, and was hence constantly forming cylinders, cones, spheres, &c. was asked to turn a cone; he replied that he never saw a cone, and applied for information to his partner, but without success. They were each about thirty years of age, but could have both received an important lesson in an Infant School.

A cabinet-maker, in the same place, who had been engaged for thirty years in making prisms, pyramids, &c. was asked if the prisms were done; when he replied, that they had got some *things* done, he did not know the names of any of them.

MORALS.

The teacher of a school in Boston, of about forty boys, made a visit, not long since, to some poor families, where he found several children kept from school by the want of clothes. After stating the case to his school on his return, he said that if any were disposed to assist those children, they might raise their hands; when the forty boys raised about sixty hands and several feet. What is still more to the purpose, in the course of one week they fitted out thirteen children to school, and received a lesson worth a volume of precepts, for moral instruction.

The teacher of one of the public schools in a neighboring town, found, when he took charge of it, so much disorder and insubordination, as to render the counsel and aid of the committee expedient, and found that himself and nine of the school-committee could not preserve order. He can now leave the school in the charge of one of the pupils for a whole day, without a fear of any disorder or irregularity. The smallest children, now, ask what is right, and not how they shall avoid the ferule, for of that they have no fear. Their moral power has been strengthened in the same way that the blacksmith strengthens his arm; by exercise—by *doing good to each other*—by contributing and collecting money to procure a library and school apparatus for their common benefit—by collecting specimens of Natural History for a school cabinet—and by a constant interchange of kind *acts* with each other and with their teacher.

Teachers' Seminary.

Mr. Editor,—It may, perhaps, seem hardly necessary to say anything in commendation of an institution so very popular as the English Department of Phillips' Academy at Andover. I apprehend, however, that even the friends and patrons of this school do not, in general, prize sufficiently high the almost unequalled facilities for intellectual and moral culture which it affords. This indeed, I should hardly expect those to do, who had never visited the school, and thus had opportunity, closely to inspect its operations. It cannot, I think be said, in regard to this seminary, that 'distance lends enchantment to the view.' This most minute personal examination of it would, I think, but increase the confidence with which a judicious parent would commit a son to the care of its instructers.

Allow me, sir, to lay before your readers, a few facts in regard to this school, and to say something of the impressions which have been made on my own mind by a personal acquaintance with the teachers, and personal observation of the course of instruction and discipline which they pursue. I cannot, of course, go very much into detail. To do so would require several columns of your paper, instead of the more limited span to which I must confine myself.

As a preliminary to other remarks, I ought here to say, that though it is the main object of this school, and one which is steadily and successfully pursued, to fit young men for the business of instruction, this is by no means its only object. Indeed this object is more fully attained by combining others with it,—by opening the school not only to young men who intend to become instructers, but to those who have other objects in view,—and even to boys as young as are usually admitted to our academies. The school is in this way, made a model for those members of it who are fitting themselves to instruct. While attending to the *theory* of instruction and discipline so ably taught by Mr. Hall, they can see an excellent *practical exemplification* of this theory in the daily management of the school.

The students in this seminary have inestimable facilities for the prosecution of their studies in the *apparatus* of various kinds with which it is furnished. Several sets of Holbrook's school apparatus are employed for the illustration of elementary studies. The chemical apparatus is sufficient for a full course of lectures. The philosophical apparatus is very good. In some respects, it is uncommonly so—hardly surpassed, it is believed, by any thing of the kind at most of our colleges. Especially may this be said with reference to the apparatus for experiments in electricity. The set of math-

ematical instruments belonging to the school is sufficient for all the purposes of civil engineering. Valuable additions have recently been made to it. I ought, perhaps, to add, that the school is well furnished with maps of various kinds.

Of the excellent apparatus of the school, frequent use is made in courses of *lectures*. Lectures are given on Chemistry, Natural Philosophy, Geography, &c. Lectures on School-keeping are also given to the class of teachers.

One of the most obvious and striking excellencies in the course of instruction and discipline, is the perfect *order* which is obvious throughout. The quaint precept, 'a time for every thing, and every thing in its time,' embraces a leading principle in the course of management at this seminary. To this the pupils are required to conform. And, independently of its effect in facilitating their progress in study, it exerts an admirable influence on their character, and the way of preparation for the systematic and efficient discharge of the various duties of future life.

With two things in the mode of instruction, I have been peculiarly pleased,—its *thoroughness* and its *practical character*. It seems to be the aim of all the teachers to lead their pupils not merely to the knowledge of words, but of things,—not simply to the exercise of memory on the language of a text-book, but to the vigorous and searching action of intellect on the subjects studied. And these subjects they are taught to regard not as mere abstract matters, but as things which have various and important relations to the business of life.

But much as I have been pleased with the mode of instruction in the school, I have been still more highly gratified with the mode of *government*. This is emphatically *paternal*. There is very great freedom of intercourse between the instructers and pupils. And obedience is secured mainly by appeals to the hearts and consciences of the pupils,—appeals to which a right response seldom fails to be made.

The *culture of the heart* is made a prominent object by the instructors. The moral relations of the pupils to each other, to all mankind, and to their Maker, are often brought before them,—not in the way of abstract speculation, but in the most practical and engaging way. The tone of moral feeling in the school is high. And when this fact is viewed in connexion with the pure state of morals in the neighborhood of the institution, parents, I think, may feel a confidence, that a most salutary moral influence will bear on the hearts of their children here.

It would give me pleasure to draw from my personal observation interesting illustrations of the statements I have made. But my limits will not permit. I cannot forbear, however, to speak more particularly of the present instructers of this Seminary. To touch on their merits, is, indeed, a delicate matter. But, as they hold public stations, and as parents ought to know something about the men to whose care they commit their children, I deem it not improper to do so.

Of Mr. HALL, I need, perhaps, only to say to those who have read his 'Lectures on School-keeping,' that these Lectures present a very good transcript of his character as an instructer. Indeed, they might well be expected to do so; as they give the results of his own experience—the principles and plans which he has put to the test of practice. His pupils, I have reason to believe, find him indefatigable, patient, and thorough in instruction; mild but firm and consistent in government; and, above all, 'always abounding' in lessons of moral wisdom.

Mr. F. A. BARTON, a graduate of Dartmouth College, who is, at present, associated with Mr. Hall in the instruction of the Seminary, is a very faithful and successful instructer. In one department, especially, which is mainly committed to him---that of mathematics---very few instructors, I believe, surpass him.

The *Primary Department*, as it is called, consisting of the younger members of the school, is under the immediate care of Mr. L. TENNEY; of whose mode of instruction and government, I can hardly speak in terms adequate to my sense of its excellence. He is, at once, the father and the instructer of the lads committed to his care. Manifesting the utmost affection for his pupils, he finds that love is 'the loan for love.' His affection is reciprocated. It is enough to gladden one's heart, to see with what confiding fondness they cluster around him. Seldom have I seen such a delightful interchange of confidence and affection between an instructer and his pupils. Nor is he skilled only in winning the hearts of his youthful charge. His mode of instruction is of the very highest order. I have been surprised and delighted at the exhibition of intellectual effort, and the evidence of uncommon improvement, which I have seen in his school-room. I am confident that no judicious parent could spend a few hours in it, without ardently desiring to put his own children in possession of the inestimable privileges which are there enjoyed.

To those who wish to fit themselves for the business of instruction, this Seminary affords advantages which they can hardly find elsewhere. I have already spoken of it as presenting an excellent model for teachers. I have mentioned the lectures on school-keeping which Mr. Hall gives to the class of teachers. I would state also, that this class have formed themselves into a Society for the purpose of discussing subjects connected with the business of teaching. Taking into view, also, the excellent apparatus of this Seminary, the advantages which are derived from its location, and from the relation its instructions sustain to the great efforts which are now making in the cause of education, it may be confidently recommended to all who wish to become thorough and successful teachers.

In what I have said, I have intended to make no invidious comparison of this with other schools. Indeed, there are very few if any Seminaries in our country on the plan of this. I have merely stated facts, and expressed freely the impressions which have been made on my own mind in regard to it. If any of your readers should think I have exagerated, let them visit the school, and I greatly mistake if they are not convinced that the half has not been told.

S.

SCIENTIFIC APPARATUS.

THE very great rapidity with which apparatus for Lyceums, Schools and Families, has come into use, since the simple instruments designed for those three classes of institutions have been prepared, and the great satisfaction they have given wherever they have been used,—is a sufficient pledge of their universal introduction, and that, within a moderate period of time. The *Common School Apparatus* is in use, not only in all the States in the American Union, but, more or less, on the other continent. Some sets have gone both to Asia and Africa, where it answers a most valuable purpose in elementary instruction. It has many times been remarked, by those who have used the school apparatus, that they consider it the key to open the door to every other improvement in schools. When the mind of the pupil, and the teacher too, is once called out from the book, to observe, examine, think and judge for itself, on those elements of science illustrated by those simple instruments designed for the purpose; it immediately applies itself to other objects and other subjects, and a new and an enlarged field of vision and of thought is at once brought to view. The mind then throws off the trammels of books, and *begins* to think, act, and move by its own strength.

Apparatus for visible illustrations, are not only indispensable to aid the young mind in making its first efforts, but it is far more *economical* than books, so far as it can be used. It is more economical, because it costs less at the outset to furnish a school, as one set answers for a whole school for a course of years, while every pupil must be supplied with books; and as it makes impressions upon the mind more *rapidly, clearly, permanently* and *agreeably*, than can be done by books merely. It also leads the pupil to cultivate his mind while out of school, and to continue in a course of intellectual progress, when his days of school instruction are gone by.

Some *intellectual tools*—some instruments for coming at the young mind through the eye, are not only useful, pleasant, economical and indispensable, but the way for supplying every village, neighborhood, school and family in the land, seems to be both feasible and easy.

To furnish every village, it is only necessary to form a Lyceum, or for some twenty, fifty, or an hundred of its citizens, to unite and pay one or two dollars each, and the necessary means will be provided.

Many schools have already been supplied by the children themselves, which requires only twenty or thirty cents each; which, by leading them to *act* and to *give*, enlarges their hearts in the procuring, as much as it does their minds in using.

The use of intellectual toys in families, has uniformly been found, wherever it has been adopted, not only a source of instruction, contentment and happiness to children, but a great saving of expense.

Whether amusement, instruction, general diffusion of knowledge, agriculture, the mechanic arts, national wealth, or the future prosperity and perpetuity of our Republic, is considered; it is both the duty and interest of every individual to give his portion of effort and money, to establish a Lyceum in every county, town and village in our land, and to furnish every lyceum, school, and family, with the necessary instruments for their intellectual and social improvement, for their moral growth, and their true dignity and happiness.

SCHOOL AGENT SOCIETY.

THE members and friends of the Society under the above title, a brief exposition of whose objects was given in our first number, will be glad to learn, that the Corresponding Secretary has received several letters from the West and South, expressing great interest in the objects of the Society, and a wish to co-operate with agents who may visit them.

A gentleman living upon the banks of the Ohio, offers to give one half of his farm, consisting of one thousand acres, to cooperate with the Society, if such arrangements can be made as will secure the confidence of the public. He is of opinion, that a Lyceum may be established there, of such great and evident utility, as would induce the Legislature of Virginia to appropriate to it a portion of the proceeds of their fund for common education, which amounts to 13 or 14 hundred thousand dollars.

When the magnitude of the object the Society has in view, and the great ease with which that object can be effected, are considered, together with the vast and dignified field for benevolent enterprise it presents, it is hoped that all who are disposed and qualified to engage as Agents, will make their wishes known to some Officer of the Society. It is morally certain, that if one thousand Agents, competent to the task, could be found, they could all be most usefully, profitably, and pleasantly employed, the coming autumn and winter.

The system of Circuit Teaching in connection with Lyceums, contemplated by the Society, is admirably calculated to place those institutions on a permanent and prosperous foundation. If from six to twelve Lyceums could engage an experimental teacher to visit them weekly or semi-monthly, in succession, it would give double, if not tenfold efficiency and success to their own efforts.

Many Lyceums have already erected commodious buildings for their use; others will probably procure similar accommodations during the present and coming season.

Where Lyceums are organized and furnished with buildings and apparatus, they are most favorably situated to carry into operation the proposed system of Circuit Schools; and if their wants are made known, competent teachers can undoubtedly be procured.—Any applications for Teachers for Lyceums, which may be made to the Corresponding Secretary of the above Society, will be promptly and gladly attended to.

The Constitution of the Society is given below.

J. HOLBROOK, *Cor. Sec'y.*

Constitution
OF THE
AMERICAN SCHOOL AGENT SOCIETY,
ORGANIZED JULY 13, 1832.

ART. 1. This Society shall be called THE AMERICAN SCHOOL AGENT SOCIETY; the object of which shall be to disseminate information respecting Schools, to procure and encourage the labors of School Agents and Circuit Teachers, and in such other ways as may be deemed expedient, to promote the cause of Common Education throughout our country, but especially at the South and West.

ART. 2. Any person may become a member of the Society, by signing the Constitution, or upon his election by ballot by the Board of Directors.

ART. 3. The Society shall meet annually, on the first Monday in August, when the proceedings of the foregoing year shall be reported, and a Board, consisting of a President, Vice President, First Corresponding Secretary, a Recording Secretary, a Treasurer, and Twelve Directors, shall be chosen by ballot.

ART. 4. It shall be the duty of the Board to appoint Agents, and recommend Teachers, at their discretion; to take proper measures for obtaining funds necessary for accomplishing the designs of the Society; to draw orders on the Treasurer, for the payment of all monies which shall be expended in the prosecution of the Society's plans; to inspect annually the state of the Treasury; and in general, to perform all other duties not inconsistent with the Constitution, which they shall deem necessary to the attainment of the great objects the Society have in view.

ART. 5. The Board of Directors may appoint such a number of Corresponding Secretaries, in different parts of the country, for purposes of cooperation with the First Corresponding Secretary, as they may think necessary to enable the latter Officer effectually to discharge the duties devolving on him.

ART. 6. The Directors shall have power to supply any vacancies which may occur in their Board, till the next annual meeting.

ART. 7. The President, and in his absence, the Vice President, in concurrence with two others of the Directors, may call special meetings of the Society.

ART. 8. At all meetings of the Board of Directors, eight members shall be requisite to constitute a quorum; and at all meetings of the Society, twenty members.

ART. 9. The Directors shall, from time to time, recommend to the Society, such Bye-Laws as they may deem necessary to facilitate the transaction of business.

ART. 10. It shall be the duty of every member of the Society, to encourage suitable persons to become Teachers and Agents, and to recommend such to the Board, as are, in their opinion, already qualified for these professions.

ART. 11. No alteration of this Constitution shall be made, except on recommendation of the Directors, and by a vote of three fourths of the members present at an annual meeting.

A true Copy,

MILO P. JEWETT, *Rec. Sec.*

AMERICAN INSTITUTE OF INSTRUCTION.

THOUGH the commencement of the annual session of this Institution, just closed, was not the most promising, in the result it was probably of greater interest and practical utility, than either of the preceding.—The lecture of Dr. Spurzheim, of Germany, was a sufficient compensation for a journey of a hundred miles. It was both practical and practicable, and if put into practice, would produce a moral revolution, and we believe the restoration of our race, in less than half a century.

The prominent points in his lecture were, that the physical, intellectual and moral faculties of the complex being, man, were designed for each other; and that each must be strengthened by exercise—the moral, no less than the intellectual and physical; that precepts on moral goodness, without *doing good*, would do no more to strengthen moral power, than lessons on music, without the use of an instrument or the voice, would make a singer or musician.

The lecture was a most severe comment on our whole system of education, from the learning the alphabet, to the closing of a course at a theological seminary. Where can an institution be found, which directs the same attention to the *Practice of Benevolence*, as to the study of the spelling-book, arithmetic and grammar? 'And until children receive some further moral lessons than to say to others, 'be ye warmed and filled,' we cannot expect to see a *beginning* in the great work of reforming the world. And for one lesson in practical morals—in *doing good to others*, we beg leave to propose, that each child, in all the primary schools in the Union, contribute, on every Monday morning, *one cent* or more, for libraries, apparatus, or other facilities for aiding *each other* in their progress. For another lesson, we would propose that each school make a collection in Natural History, not only for its own pupils, but for other schools, and do what they can to bring about a system of exchanges, and of cooperation in the great work of their *own education*, and of the salvation of their country, and the redemption of their race from ignorance and misery.

CIRCUIT SCHOOLS.

MR. HALL, of the 'Teachers' Seminary,' has commenced a system of Circuit Teaching, in several towns in the vicinity of his school. The plan is, to have several Schools or Lyceums established, to which he shall give a course of weekly instruction, or rather aid them to instruct themselves, in various useful branches. His confidence in the plan, and his prospects of success, are, if possible, greater than before he tried the experiment.

If teachers, qualified to take charge of such Lyceums or Circuit Schools, could be found, there is, probably, hardly a town, village, or neighborhood in the country, whose citizens would not esteem it a privilege to join them.

Mr. Hall's seminary furnishes the very best opportunities for persons to qualify themselves to engage in this enterprise; and as several thousand of Circuit Teachers are wanted, we hope some hundreds of them will be found during the present season.

SCHOOL LIBRARIES.

ONE of the common district schools in Lynn has appropriated more than a hundred dollars for a library and for apparatus, contributed or collected by the children themselves. All the schools in that place are furnished with similar furniture, procured in the same way.

Measures are in progress to get up School Libraries, to commence with twenty-five or thirty volumes, with provisions to continue a series of a dozen or twenty volumes a year, for regular accessions to the libraries, of books fitted to the design.

MR. GALLAUDETT'S BOOKS.

THE Picture and Defining Book, the first and second part of the Book on the Soul, and Natural Theology, all by Mr. Gallaudett, deserve a place in every school and every family in our country. We intend to present some of their prominent features to our readers hereafter.

STEAM BOATS.

ABOUT two hundred Steam Boats are plying upon the Mississippi and its branches, which form nearly 20 thousand miles of navigable waters.

NATURAL SOAP.

THE fruit of the Horse Chesnut is said to answer the purposes of soap, in domestic economy.

PINS.

PINS were brought from France in 1543, and were first used in England by Catherine Howard, Queen of Henry the Eighth. Before that invention, both sexes used ribbands and laces, with points and tags, hooks and eyes, and skewers of brass, silver and gold.

In the year 1543, it was enacted, 'that no person shall put to sale any pinnes, but only such as shall be double-headed, and have the heads soldered fast to the shank of the pinnes, well smoothed, the shank well shaped, the points well and round filed, counted and sharpened.'

From Good's Gallery of Nature and Art.

Eruptions of Vesuvius.

There is no volcanic mountain in Europe, whose desolating paroxysms have been so fatally experienced, and so accurately transmitted to us, as those of Vesuvius.

This mountain is well known to constitute one of the natural wonders of the kingdom of Naples. Like Parnassus, it has been said to consist of two summits, one of which, situated in a westward direction, is called by the natives Somma; and the other, running in a southern line, Proper Vesuvius, or Vesuvio; and it is this last alone which emits fire and smoke. The two hills or summits are separated by a valley of about a mile in length, and peculiarly fertile in its productions. The eruptions of this mountain have been numerous in almost every age of the Christian æra; and on many occasions prodigiously destructive. From the numerous narrations to which they have given rise, we shall confine ourselves to those that are most awful or interesting.

The earliest and one of the most fatal eruptions of Vesuvius that occurs to us in history, took place in the year 79 of the Christian æra, and the first of the reign of Titus. All Campania was alarmed by its violence, and the country was devastated in every direction to a very great distance; numerous towns, with the whole of their inhabitants, were consumed, and among the rest, the elegant cities of Pompeii and Herculaneum, the ruins of which, after having been utterly overwhelmed and lost for more than sixteen centuries, were at length traced out by accident; and, so far as they relate to the latter, have been explored to a considerable extent. The wreck of Herculaneum was discovered in 1739, and was rendered accessible by a well in the course of the ensuing year.

Pompeii had suffered severely from an earthquake, sixteen years before the eruption of 79, but had been rebuilt and embellished with several stately edifices; especially with a magnificent theatre, in which the people were assembled, and intent upon the spectacle, when this tremendous visitation burst upon them, swallowing up the city by an earthquake, and overwhelming its site to a considerable depth with the fiery materials that were thrown forth from the mouth of the crater. The cities of Puteoli and Cumæ were also greatly damaged, partly by the concussions, and partly by the burning ashes, which last, according to the concurrent assertion of ancient historians, extended to Africa, Egypt and Syria, and at Rome turned the day suddenly into night, to the consternation of the inhabitants. It was during this eruption, that the elder Pliny fell a victim to suffocation, the poet Cesius Bassus and his household were consumed by the flames, and Agrippa, son of Claudius Felix, the well-known governor of Judæa, and of Drusilla, daughter to Agrippa, the last king of the Jews, perished in his youth, as we are told by Josephus; though the passage of this writer in which he refers for a more particular account of his death, is no longer extant.

The earliest of the eruptions of Vesuvius of which we have any narrative, is so exquisitely and impressively related by the younger Pliny, in two letters to his friend Tacitus the historian, that it has been rendered almost as celebrated, from this fine and touching description, as on account of the extent of the calamity itself.—But though this description is the earliest, we are not to conclude that no eruption had ever taken place antecedently. Neither Pliny nor Tacitus hint at any thing to this effect, nor express the smallest surprise at the phænomenon, which they undoubtedly would have done, had it been the first of the kind. One of the earliest we meet with in history, next to that narrated by Pliny, is comparatively in our own times; it occurred in 1538, and formed the crater near Pozzicoli, which has received the name of *Monte Nuovo*. Curiosity led many persons to look into this crater a few days after the eruption had ceased, when twenty of the rashest and most daring were destroyed by a sudden explosion of smoke, stones, and ashes. The next of which we have any document, took place in 1631, and is described by Antonio Santorelli, as also by the Abbate Braccini: during which the sea, as in the eruption of 79, retreated from the coast. The next memorable eruption in the order of time, is that described by Valetta in 1707; since which period, accounts of not fewer than ten others have been published in the Philosophical Transactions, for nearly half of which the world is greatly indebted to the assiduity and intrepidity of Sir William Hamilton. Besides these, we have also an account of an eruption, in 1717, by bishop Berkeley, and of another in 1737, by Dr. Serao, published the same year at Naples

The description of Pliny is as follows; and the two letters that contain it are numbered sixteen and twenty in the sixth book of his epistolary collection.

'TO TACITUS.

'Your request that I would send you an account of my uncle's death, in order to transmit a more exact relation of it to posterity, deserves my acknowledgments; for if this accident shall be celebrated by your pen, the glory of it I am well assured will be rendered for ever illustrious. And notwithstanding he perished by a misfortune, which, as it involved at the same time a most beautiful country in ruins, and destroyed so many populous cities, seems to promise him an everlasting remembrance; notwithstanding he has himself composed many and lasting works; yet I am persuaded the mentioning of him in your immortal writings will greatly contribute to eternize his name. Happy I esteem those to be, whom Providence has distinguished with the abilities either of doing such actions as are worthy of being related, or of relating them in a manner worthy of being read; but doubly happy are they who are blessed with both these uncommon talents; in the number of which my uncle, as his own writings and your history will evidently prove, may justly be ranked. It is with extreme willingness, therefore, that I execute your commands; and should indeed have claimed the task, if you had not enjoined it. He was at that time with the fleet under his command at Misenum*. On the 23d of August, about one in the afternoon, my mother desired him to observe a cloud which appeared of a very unusual size and shape. He had just returned from taking the benefit of the sun†, and after bathing himself in cold water, and taking a slight repast, had retired to his study; he immediately arose and went out upon an eminence from which he might more distinctly view this very uncommon appearance. It was not at that distance discernible from what mountain this cloud issued, but it was found afterwards to ascend from mount Vesuvius‡. I cannot give you a more exact description of its figure than by resembling it to that of a pine-tree, for it shot up a great height in the form of a trunk, which extended itself at the top into a sort of branches; occasioned, I imagine, either by a sudden gust of air that impelled it, the force of which decreased as it advanced upwards; or the cloud itself being pressed back again by its own weight, expanded in this manner. It appeared sometimes bright, and sometimes dark and spotted, as it was either more or less impregnated with earth and cinders. This extraordinary phænomenon excited my uncle's philosophical curiosity to take a nearer view of it. He ordered a light vessel to be got ready, and gave me the liberty, if I thought proper, to attend him. I rather chose to continue my studies; for, as it happened, he had given me an employment of that kind. As he was coming out of the house, he received a note from Rectina the wife of Bassus, who was in the utmost alarm at the imminent danger which threatened her; for her villa being situated at the foot of mount Vesuvius, there was no way to escape but by sea; she earnestly intreated him therefore to come to her assistance. He accordingly changed his first design, and what he began with a philosophical, he pursued with an heroical turn of mind. He ordered the galleys to put to sea, and went himself on board with an intention of assisting not only Rectina, but several others; for the villas stand extremely thick upon the beautiful coast. When hastening to the place from which others fled with the utmost terror, he steered his direct course to the point of danger, and with so much calmness and presence of mind, as to be able to make and dictate his observations upon the motion and figure of that dreadful scene. He was now so nigh the mountain that the cinders, which grew thicker and hotter the nearer he approached, fell into the ships, together with pumice-stones, and black pieces of burning rock; they were likewise in danger not only of being a-ground by the sudden retreat of the sea, but also from the vast fragments which rolled down from the mountain, and obstructed all the shore. Here he stopped to consider whether he should return back again, to which the pilot advising him; 'Fortune,' said he, 'befriends the brave: carry me to Pomponianus.' Pomponianus was then at Stabiæ§, separated by a gulf which the sea, after several insensible windings, forms upon that shore. He had already sent his baggage on board; for though he was not at that time in actual danger, yet being within the view of it, and indeed extremely near, if it should in the least increase, he was determined to put to sea as soon as the wind should change. It was favourable, however, for carrying my uncle to Pomponianus, whom he found in the greatest consternation; he embraced him with tenderness, encouraging and exhorting him to keep up his spirits; and the more to dissipate his fears, he ordered, with an air of unconcern, the baths to be got ready; when, after having bathed, he sat down to supper with great cheerfulness, or at least (what is equally heroic) with all the appearance of it. In the mean while the eruption from mount Vesuvius flamed out in several places with much violence, which the darkness of the night contributed to render still more visible and dreadful. But my uncle, in order to soothe the apprehensions of his friend, assured him it was only the burning of the villages, which the country people had abandoned to the flames; after this he retired to rest, and it is most certain he was so little discomposed as to fall into a deep sleep; for being pretty fat, and breathing hard, those who attended without, actually heard him snore. The court which led to his apartment being now almost filled with stones and ashes, if he had continued there any time longer, it would have been impossible for him to have made his way out; it was thought proper therefore to awaken him. He got up, and went to Pomponianus and the rest of his company, who were not unconcerned enough to think of going to bed. They consulted together whether it would be most prudent to trust to the houses, which now shook from side to side with frequent and violent concussions; or fly to the open fields, where the calcined stones and cinders, though light indeed, yet fell in large showers, and threatened destruction. In this distress they resolved for the fields, as the less dangerous situation of the two; a resolution which, while the rest of the company were hurried into it by their fears, my uncle embraced upon cool and deliberate consideration. They went out then, having pillows tied upon their heads with napkins; and this was their sole defence against the storm of stones that fell round them. Though it was now day every where else, with them it was darker than the most obscure night, excepting only what light proceeded from the fire and flames. They thought proper to go down farther upon the shore, to observe if they might safely put out to sea, but they found the waves still run extremely high and boisterous. There my uncle, having drunk a draught or two of cold water, threw himself down upon a cloth which was spread for him, when immediately the flames and a strong smell of sulphur, which was the forerunner of them, dispersed the rest of the company and obliged them to arise. He raised himself up with the assistance of two of his servants, and instantly fell down dead; suffocated, as I conjecture, by some gross and noxious vapour, having always had weak lungs, and frequently subjected to a difficulty of breathing. As soon as it was light again, which was not till the third day after this melancholy accident, his body was found entire, and without any marks of violence upon it, exactly in the same posture that he fell, and looking more like a man asleep than dead. During all this time my mother and I, who were at Misenum—But as this has no connection with your history, so your enquiry went no farther than concerning my uncle's death; with that therefore I will put an end to my letter; suffer me only to add, that I have faithfully related to you what I was either an eye-witness of myself, or received immediately after the accident happened, and before there was time to vary the truth. You will choose out of this narrative such circumstances as shall be most suitable to your purpose; for there is a great difference between what is proper for a letter, and an history; between writing to a friend, and writing to the public. Farewell.'

* In the gulf of Naples.

† The Romans used to lie or walk naked in the sun, after anointing their bodies with oil, which was esteemed as greatly contributing to health, and therefore daily practised by them.

‡ About six miles distant from Naples.—This dreadful eruption happened A. D. 79, in the first year of the emperor Titus.

§ Now called Castel e Mar di Stabia, in the gulf of Naples.

From the Watchman.

Amusements.

Mr. Editor,—If I could be permitted to regulate the amusements of children, others might regulate schools. For while amusements are vicious, immoral, or dissipating in their tendency, neither literary nor religious institutions can produce a virtuous or a happy community. The time has been, and to a great extent is now, when amusements, either for children, or other young people, are any thing but moral or elevating in their tendency. With the school-room there is associated something that is irksome. With the ordinary sports of children, there is little that is calculated to enlighten or dignify the mind, and much that is calculated to degrade and demoralize it. If schools could be rendered agreeable, and amusements instructive, both would be better, and reciprocal and salutary in their tendency and results.

The first improvement to be effected in the amusements of children, is a change in the character of their toys. Few of them are calculated to interest children for a long time, much less to improve them; while nothing is more certain, than that their toys may be almost wholly intellectual and moral in their tendency, and at the same time amuse children more and cost parents less. A set of blocks or bricks, as they are sometimes called, which can cost but a dollar or two, will amuse a child for months, and even years;—while most of the articles found in toy-shops, costing three times the amount, will interest them but for a few days, and then be thrown aside as useless. The reason is plain; the one occupies the mind, and exercises the intellect; the other pleases from its novelty.

The various occasions which call children together, such as military trainings and musters, 4th of July celebrations, and many of their more common meetings, are directly immoral and dissipating in their tendency. Two or three years since, I spent the 4th of July in a neighboring town, where I saw a company of twenty boys marching about the streets with a drum and fife, drawing a small powder piece after them, with a uniform that cost their parents, with other expenses, about ten dollars each. In another town where I spent a night, I attended the meeting of a Juvenile Lyceum, a branch of the Town Lyceum, and consisting of twenty or thirty children. A lad of ten years old presided, and another of five years old explained, on a map, the Geography of the country where they resided.

Both collections of children were amused, but one by the exercise of their intellects and hearts, the other at the expense of both. The one were in an upward, the other in a downward course.

I attended the Juvenile Concert recently held in this city. The day after, I witnessed the noise and bustle occasioned by the visit of a military company from a neighboring city, and was forcibly struck with the contrast. Both produced excitement; but the one was kind, softening, and moral in its tendency; the other boisterous and decidedly unchristian. The one cost those who enjoyed it, four or five hundred dollars, which are to be appropriated to the education of children and the relief of the poor; the other could not have cost less than ten thousand dollars, and probably twice that sum, which was dissipated at the time in wine, noise and nonsense. The one eminently calculated to improve all the schools in the country, by introducing music as a branch of instruction; the other to excite a love for empty parades, dissipation and war.

It is truly gratifying to find that public sentiment and general practice are changing on this subject. And if parents consulted the gratification or the improvement of their children, the prosperity of our country, the reformation of the world, or the expenses of their families, they would be wholly changed at once. Every family would be provided with a set of *intellectual toys;* the sports of children would be experiments in science, or collecting specimens in Natural History; their meetings would be attended with something to exercise their minds and improve their hearts; military trainings and musters would give place to education conventions; and the collection of muskets, swords and powder, and other instruments of death, would be found by experience to be less attractive than cabinets of minerals, plants, and other specimens to illustrate the beauty and abundance of nature, and the wisdom and goodness of our Creator.

FRANKLIN.

QUESTIONS

on the second number of the Lyceum.

What two ingredients constitute carbonic acid?

Why is it called carbonic acid, and why is that term more appropriate than fixed air or choak damp?

When is carbonic acid most healthful, when taken into the lungs, or the stomach?

How does it affect life to breathe pure carbonic acid? and does it increase or destroy combustion?

Which is heaviest, carbonic acid gas, or common air?

Where is carbonic acid found at all times, and what operations in nature and the arts are constantly producing it?

From what mineral or rock, do the manufacturers of soda water procure this acid for their use?

Which is most common, carbonic acid, or vinegar?

From what substance is vinegar formed? In the process of fermentation, which is first formed, vinegar, or alcohol?

What acid is formed from the distillation of wood? and is it most like vinegar, or sulphuric acid?

To what uses is pyroligneous acid applied?

What two simple substances compose sulphuric acid, and how is it formed?

What are the names of the three most important alkalies?

What effect have alkalies upon acids?

What alkali is combined with nitric acid to form salt petre?

What alkali is united with muriatic acid to form table salt?

What alkali is used to make hard soap, potash, or soda? and what is used for soft soap?

What acid and alkali are united to form glauber salts?

When acids and alkalies are combined, do they become more, or less corrosive?

If an accident occur from an acid, what substance will be most likely to correct it?

If a person should drink a solution of potash, what substance might he take to prevent the evil he was exposed to?

When spots are made, or the color destroyed in a garment by an acid, what substance will restore it?

In what traits of character do children exceed adults?

Who is most likely to decide correctly on a question of right and wrong, a child, or a man?

What circumstances tend to lead adults to wrong decisions on questions of moral obligation?

When is the most favorable time to cultivate moral power and to qualify an individual to judge correctly on questions of right and wrong, in childhood, or mature years?

What are some of the most common specimens of quartz?

What are some of the names given to quartz from their color?

What are the names of those varieties of quartz which are cut, or wrought for ornaments?

Which is the most abundant earth in quartz, silex, alumine, lime, or magnesia?

Of what three simple substances is starch composed?

Of what other substance besides starch is wheat flour composed?

Which is most abundant in indian corn and potatoes, starch, or gluten?

What substance retains the carbonic acid formed in the raising of bread, and causes it to be light, gluten, or starch? Which is most soluble in water, and which most elastic?

How can the starch and gluten in wheat flour be separated?

What use does the farmer make of parallel lines? also the mechanic and surveyor?

In what direction do the parallel lines run, to divide the western states into townships?

How large are townships in the western valley, as divided by order of Congress?

Into how many sections is each township divided, and which is appropriated to the advancement of education?

In what part of each township is the school section?

In the effervescence produced by pouring vinegar upon pearlash or salaratus, what gas is formed?

What are some of the effects produced by gravitation?

To what extent does the law of gravitation operate?

What law must be applied for the regulation of a moral universe, and what must be the extent of that law?

What would be the effect upon the world, if moral beings should obey as implicitly the law established for them, as matter obeys the laws which regulates that?

What are some of the uses of intellectual toys for children?

With which are children rendered most happy, those toys and amusements which improve their minds and hearts, or those which injure both?

Which is most expensive, for parents to furnish children with toys and amusements, or to let them select them for themselves?

Which is most strengthened by exercise, the muscles, intellect, or morals?

Towards what object can children be led to exercise kind feelings?

What institutions are best calculated to regenerate the world, infant schools or colleges?

Have courts of justice and prisons ever made a *beginning* to reform society?

Which would produce the greatest effect in removing poverty, and preventing poor taxes, five dollars appropriated to infant schools, or five thousand to poor houses and prisons?